

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1-29. (Canceled)

1 1-52. (Canceled)

1 53. (New) A formatting template for printing an XML document, comprising an  
2 XML Descriptor (XMD) associated with an XML data element of the XML document,  
3 wherein the XMD is identified by an associated qualified tag having a concatenation of a  
4 plurality of XML start tags representing start tags hierarchically traversed in the XML  
5 document to reach the XML data element, the XMD providing formatting to content  
6 associated with the XML data element.

1 54. (New) The formatting template of claim 53, wherein the data map comprises  
2 a chain of XML descriptors for formatting attributes if XML elements.

1 55. (New) The formatting template of claim 53, wherein an XML descriptor that  
2 does not have a matching qualified tag is skipped and a next XML descriptor matching a start  
3 tag is used in formatting the XML data.

- 1        56. (New) A printing system, comprising:
  - 2            a spooler for receiving printable information from the print channel;
  - 3            a print services facility for parsing an XML file; and
  - 4            a printer for printing the print steam according to the formatting defined by the
  - 5            formatting template;
    - 6                wherein the formatting template includes an XML Descriptor (XMD)
    - 7                associated with an XML data element of the XML document, wherein the XMD is identified
    - 8                by an associated qualified tag having a concatenation of a plurality of XML start tags
    - 9                representing start tags hierarchically traversed in the XML document to reach the XML data
    - 10              element, the XMD providing formatting to content associated with the XML data element.
  
- 1        57. (New) The formatting template of claim 56, wherein the data map comprises
- 2        a chain of XML descriptors for formatting attributes if XML elements.
  
- 1        58. (New) The formatting template of claim 56, wherein the parser skips an XML
- 2        descriptor that does not have a matching qualified tag and uses a next XML descriptor having
- 3        a matching start tag to format the XML data.
  
- 1        59. (New) The formatting template of claim 56 further comprising a buffer for
- 2        storing start tags in order as the XML file is parsed.

- 1        60. (New) A method for printing XML documents directly using a formatting
- 2        template, comprising:
  - 3            placing an XML document to be printed on a server spool;
  - 4            parsing the XML document to identify start tags hierarchically traversed in the XML
  - 5            document to reach an XML data element;
  - 6            searching a data map comprising XML descriptors identified by an associated
  - 7            qualified tag having a concatenation of a plurality of XML start tags until a qualified tag
  - 8            associated with an XML descriptor matches the identified start tags hierarchically traversed
  - 9            in the XML document to reach the XML data element;
  - 10            formatting the XML data element according the XML descriptor associated with the
  - 11            qualified tag having a concatenation of a plurality of XML start tags matching the identified
  - 12            start tags hierarchically traversed in the XML document to reach the XML data element;
  - 13            merging the XML element associated with the XML descriptor associated with the
  - 14            qualified tag having a concatenation of a plurality of XML start tags matching the identified
  - 15            start tags hierarchically traversed in the XML document to reach the XML data element to
  - 16            produce a formatted print data stream; and
  - 17            printing a document using the produced formatted print data stream.

- 1        61. (New) The method of claim 60 further comprising skipping an XML
- 2        descriptor that does not have a matching qualified tag and using a next XML descriptor
- 3        matching a start tag to format the XML data.

1        62. (New) An article of manufacture comprising a program storage medium  
2        readable by a computer, the medium tangibly embodying one or more programs of  
3        instructions executable by the computer to perform a method for printing XML files directly  
4        using a formatting template, the method comprising:  
5                placing an XML document to be printed on a server spool;  
6                parsing the XML document to identify start tags hierarchically traversed in the XML  
7        document to reach an XML data element;  
8                searching a data map comprising XML descriptors identified by an associated  
9        qualified tag having a concatenation of a plurality of XML start tags until a qualified tag  
10        associated with an XML descriptor matches the identified start tags hierarchically traversed  
11        in the XML document to reach the XML data element;  
12                formatting the XML data element according the XML descriptor associated with the  
13        qualified tag having a concatenation of a plurality of XML start tags matching the identified  
14        start tags hierarchically traversed in the XML document to reach the XML data element;  
15                merging the XML element associated with the XML descriptor associated with the  
16        qualified tag having a concatenation of a plurality of XML start tags matching the identified  
17        start tags hierarchically traversed in the XML document to reach the XML data element to  
18        produce a formatted print data stream; and  
19                printing a document using the produced formatted print data stream.

1        63. (New) The article of manufacture of claim 41 further comprising skipping an  
2        XML descriptor that does not have a matching qualified tag and using a next XML descriptor  
3        matching a start tag to format the XML data.